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re Patent Application of  
Megens

Serial No. 08/747,873

Filed: November 13, 1996

Examiner: J. Lisehora

"MOVABLE LOADING BRIDGE HAVING  
AN INFLATABLE FLEXIBLE BODY"

I, Kristin L. Shimeck, hereby certify that this correspondence  
is being deposited with the US Postal Service as first class  
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Kristin L. Shimeck

Signature

November 12, 1997

Date of Signature

#22

**AMENDED APPEAL BRIEF**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In response to the comment on the top of page 3 of the Examiner's Answer dated October 20, 1997, Applicant submits this Amended Appeal Brief. This Amended Appeal Brief differs from the previously filed Appeal Brief only in that it includes a new appendix with the required underlining and bracketing.

Applicant has appealed from the final rejection, dated June 9, 1997, of Claims 1-4 and 6-21. This brief is submitted in triplicate in support of Applicant's position. A check for \$150.00 in payment of the fee for this appeal brief was previously submitted.

**Real party in interest**

The real party in interest in the pending patent application is the assignee, Kelley Company, Inc., a Wisconsin Corporation have a business address of 6720 N. Teutonia Avenue, Milwaukee, Wisconsin 53209.

**Related appeals and interferences**

There are no related appeals and/or interferences.

**Status of claims**

Claims 1-4 and 6-21 stand rejected by the Examiner.

### Status of amendments

There have been no amendments to the claims since the final office action.

### Summary of invention

The present invention is directed to a loading bridge 3 (sometimes referred to as a dockleveler) for making a connection between a loading platform 1 (e.g., a loading dock) and a vehicle 30 (e.g., a lorry or truck). Such loading bridges generally include a substantially planar member (e.g., plate 15) pivotally connected to the loading platform 1, and pivot means for pivoting the planar member. The movable end of the planar member is designed to be rested on the back of the vehicle 30 to allow material handling vehicles, such as forklifts, to pass between the loading platform 1 and the vehicle 30. [see, generally, page 2, lines 1-15]

In the embodiment illustrated in Figs. 1-5, the pivot means includes a flexible body (e.g., bag 22) positioned under the planar member and on top of a base 11. The flexible body may be connected with the lower surface of the planar member by for instance adhesive or buttons. The base includes a front inclined portion 13 that supports the flexible body. The base includes a hole 24 through which a connection 23 of the flexible bag is inserted in order to provide gas to the bag. A ventilator 26 is positioned under the base and is interconnected with the flexible body so that the flexible body can be inflated and deflated to provide movement to the planar member. [see, generally, page 2, lines 28-68]

In the embodiment illustrated in Figs. 6-7, the pivot means comprises a flexible body (e.g., bellows 41) having a periphery that is spaced inwardly from the periphery of the planar member. It can be appreciated by those skilled in the art that, due to its smaller surface area, the flexible body of Figs. 6-7 requires more pressure to move the planar member than does the flexible body of Figs. 1-5. [see, generally, page 4, lines 5-40]

Issues

1. Whether claims 1, 8 and 12 are unpatentable under 35 U.S.C. §103 over U.S. Patent No. 3,659,899 to Phillips et al. ("Phillips").
2. Whether claims 2, 6-7 and 13-21 are unpatentable under 35 U.S.C. §103 over Phillips in view of U.S. Patent No. 3,784,255 to Smock ("Smock").
3. Whether claim 3 is unpatentable under 35 U.S.C. §103 over Phillips in view of U.S. Patent No. 3,822,861 to Scott ("Scott").
4. Whether claim 4 is unpatentable under 35 U.S.C. §103 over Phillips in view of Australian Patent Document No. AU588734 to Beer ("Beer").
5. Whether claims 9-11 are unpatentable under 35 U.S.C. §103 over Phillips in view of U.S. Patent No. 3,902,213 to Pfleger et al. ("Pfleger").

Grouping of claims

The rejected claims do not stand or fall together, and the following groups of claims are separately patentable:

- Group I - claims 1, 3, 4 and 6-12  
Group II - claim 2  
Group III - claim 13-15  
Group IV - claims 16-19  
Group V - claims 20-21

Argument

Group I - claims 1, 3, 4 and 6-12

Claims 1, 8 and 12 stand rejected under 35 U.S.C. §103 as being unpatentable over Phillips. Claim 1 is directed to a loading bridge for making a connection between a loading platform and a vehicle. The loading bridge is defined as having a substantially planar member pivotally connected to the loading platform, an inclined base positioned under the substantially planar member, and pivot means for pivoting the substantially

planar member. The pivot means includes an inflatable flexible body positioned on the inclined base. By virtue of the inclined base, the stresses induced in the flexible body are more uniform than if the base were horizontal, thereby decreasing the likelihood that the flexible body will tear. Further, the inclined base can provide a space underneath the base to facilitate positioning of mechanical components (e.g., ventilator, valves, etc.) and to enhance access to other areas of the pit. Also, the inclined base reduces the required volume of the inflatable flexible body and enhances stability of the flexible body.

In contrast, Phillips discloses a loading dock having a loading platform (62) and a pit defined by a level (i.e., horizontal) floor (65). A section (63) is pivotally attached to the platform, and a bag (66) is positioned under the section to provide movement to the section. The loading dock of Phillips does not have an inclined base. Furthermore, nothing in Phillips provides a suggestion or motivation to modify the floor to achieve the claimed invention. Absent such a suggestion or motivation in the prior art, obviousness has not been established. MPEP §2143; In re Mills, 16 USPQ2d 1430, 32 (Fed. Cir. 1990).

The Examiner asserts that "it would have been obvious to incline the base (floor 65) in the same way that a roof, sidewalk, driveway, or garage floor is inclined in order to facilitate drainage of liquids therefrom." However, the Examiner cannot point to a suggestion in the prior art that sets forth the desirability of making this modification to the Phillips device. That is, the Examiner has not set forth a *prima facie* case of obviousness since the Examiner has not shown that drainage of liquids is a concern to designers of loading docks, and further has not shown that inclining a base is the desired way to solve the alleged concern. In fact, since the "base" of loading docks is covered by the platform or section, and since most loading docks are either indoors or otherwise covered, the amount of

"liquids" reaching the base is negligible and not worthy of drainage concerns. Furthermore, the device disclosed in Phillips will have even less drainage concerns since the "base" is completely covered by the bag (66), as well as the section (63). Accordingly, stating that "it would have been obvious" is hindsight, and clearly an improper rejection.

For these reasons, it is respectfully requested that the rejections of claims 1, 8 and 12 be withdrawn.

Claims 3, 4, 6, 7 and 9-11 are dependent from claim 1, and are allowable for the reasons noted above with respect to claim 1.

Group II - claim 2

Claim 2 stands rejected under 35 U.S.C. §103 as being unpatentable over Phillips in view of Smock. Claim 2 is dependent on claim 1, and therefore is allowable for the reasons noted above with respect to claim 1. In addition, claim 2 is patentable separately from the other claims since claim 2 further defines a ventilator positioned under the inclined base. More specifically, claim 2 is patentable independent from the other claims since there is no teaching, suggestion or incentive to provide the above noted structure, as described below in more detail.

Positioning of the ventilator under the base advantageously protects the ventilator from damage that can be caused by exposure to the elements (e.g., rain, wind, snow, salt, etc.), exposure to contamination (e.g., dirt or fluid falling from above), contact with moving objects, or tampering by unauthorized personnel. This is particularly suitable in combination with an inclined base, which provides ample space for the ventilator.

As noted above, Phillips discloses a loading dock that includes a bag for moving a pivotable section. Exhaust gas is provided to the bag by the exhaust pipe of a vehicle. Smock discloses a dump vehicle having a chassis frame (10) and a series of dump bodies (12) that are tilttable using air bag assemblies

(35). Air is provided to the air bag assemblies by air tanks (48) mounted on a front portion of the chassis frame. Neither the Phillips device nor the Smock device discloses an inclined base and a ventilator positioned under the inclined base. More specifically, neither reference, alone or in combination, provides a suggestion or motivation to use an inclined base, and therefore obviousness has not been established (as noted above in more detail with respect to claim 1). *Id.* Furthermore, neither device, alone or in combination, provides a suggestion or motivation to position a ventilator under an inclined base, and therefore, again, obviousness has not been established. *Id.* For each of the above-noted reasons, it is submitted that claim 2 is allowable over Phillips and Smock.

The Examiner contends that "it would have been obvious . . . to locate a ventilator under the base of Phillips . . . in order to reduce the number and length of supply lines, and to protect the ventilator from adverse weather, heavy machinery, abuse and/or vandalism." The Examiner is clearly using hindsight to create incentives/motivations where none existed, and thus the rejection is improper. If the only thing an Examiner was required to do was to dream up possible incentives/motivations for the claimed invention, then a rejection under §103 could be successfully made in almost all situations. But the case law and the MPEP are clear: a rejection under §103 requires incentives/motivation in the prior art or within the knowledge generally available to one of ordinary skill in the art. MPEP §2143.01. The Examiner has not done this, and allowance of claim 2 is respectfully requested.

It is further noted that, even if one were to position a ventilator under the base of Phillips, the claimed invention (i.e., claim 2) would not be achieved. That is, the invention of claim 2 defines a ventilator positioned under an inclined base, and Phillips doesn't have an inclined base. Without a teaching or suggestion of all claim limitations, the rejection must fail. MPEP §2143.03.

With regard to the alleged incentives proffered by the Examiner, it is noted that they fly in the face of what is taught in Phillips. More specifically, Phillips teaches the use of a pneumatic pump 50 that is powered by the exhaust of the vehicle. Access to the pneumatic pump is critical so that it can be easily attached and detached from the exhaust pipes of the vehicles. Locating the pump under the base would make access to the pump, and therefor attachment to an exhaust pipe, difficult if not impossible. Furthermore, there is no space under the Phillips base to accommodate the pump, and modification of the Phillips loading dock to create such a space would require significant and expensive modification to the Phillips design. Thus, for this reason also, it is submitted that claim 2 is allowable over the cited references.

Group III - claims 13-15

Claims 13-15 stand rejected under 35 U.S.C. §103 as being unpatentable over Phillips in view of Smock. Claims 13-15 are directed to a loading bridge for making a connection between a loading platform and a vehicle. The loading bridge is defined as having a substantially planar member pivotally connected to the loading platform, a base positioned under the substantially planar member, pivot means including a flexible inflatable body for pivoting the substantially planar member, and means for inflating the flexible inflatable body. The inflating means includes a ventilator positioned under the base. By virtue of the positioning of the ventilator under the base, the ventilator will be protected from damage that can be caused by exposure to the elements (e.g., rain, wind, snow, salt, etc.), exposure to contamination (e.g., dirt or fluid falling from above), contact with moving objects, or tampering by unauthorized personnel.

Claims 13-15 are patentable separately from the other claims since claims 13-15 further define a ventilator positioned under the base. More specifically, claims 13-15 are patentable independent from the other claims since there is no teaching,

suggestion or incentive to provide the above noted structure, as described below in more detail.

As noted above, Phillips discloses a loading dock that includes a bag for moving a pivotable section. Exhaust gas is provided to the bag by the exhaust pipe of a vehicle. Smock discloses a dump vehicle having a chassis frame (10) and a series of dump bodies (12) that are tilttable using air bag assemblies (35). Air is provided to the air bag assemblies by air tanks (48) mounted on a front portion of the chassis frame. Neither the Phillips device nor the Smock device disclose a ventilator positioned under a base as claimed. More specifically, neither reference, alone or in combination, provides a suggestion or motivation to position a ventilator under a base, and therefore obviousness has not been established. Id. For this reason, it is submitted that claim 13 is allowable over Phillips and Smock.

The Examiner contends that "it would have been obvious . . . to locate a ventilator under the base of Phillips . . . in order to reduce the number and length of supply lines, and to protect the ventilator from adverse weather, heavy machinery, abuse and/or vandalism." As noted above, the Examiner is clearly using hindsight to create incentives/motivations where none existed, and thus the rejection is improper. If the only thing an Examiner was required to do was to dream up possible incentives/motivations for the claimed invention, then a rejection under §103 could be successfully made in almost all situations. But the case law and the MPEP are clear: a rejection under §103 requires incentives/ motivation in the prior art or within the knowledge generally available to one of ordinary skill in the art. MPEP §2143.01. The Examiner has not done this, and allowance of claim 13 is respectfully requested.

With regard to the alleged incentives proffered by the Examiner, it is noted that they fly in the face of what is taught in Phillips. More specifically, Phillips teaches the use of a pneumatic pump 50 that is powered by the exhaust of the vehicle. Access to the pneumatic pump is critical so that it can be easily

attached and detached from the exhaust pipes of the vehicles. Locating the pump under the base would make access to the pump, and therefor attachment to an exhaust pipe, difficult if not impossible. Furthermore, there is no space under the Phillips base to accommodate the pump, and modification of the Phillips loading dock to create such a space would require significant and expensive modification to the Phillips design. Thus, for this reason also, it is submitted that claim 13 is allowable over the cited references.

Group IV - claims 16-19

Claims 16-19 stand rejected under 35 U.S.C. §103 as being unpatentable over Phillips in view of Smock. Claims 16-19 are directed to a loading bridge for making a connection between a loading platform and a vehicle. The loading bridge is defined as having a substantially planar member pivotally connected to the loading platform, a base positioned under the substantially planar member, and pivot means including a flexible inflatable body for pivoting the substantially planar member. The pivot means includes an inflatable flexible body having a periphery that is spaced inwardly from a periphery of the planar member. The inwardly-spaced periphery of the inflatable flexible body facilitates the use of high pressure fluid, such as highly pressurized air, which is readily accessible at many manufacturing facilities. Accordingly, a separate source of pressurized fluid (e.g., a gas tank or ventilator) may not be required. Furthermore, by spacing the periphery of the flexible body inwardly from the periphery of the planar member, the risk of pinching or puncturing the bag is significantly reduced.

Claims 16-19 are patentable separately from the other claims since claims 16-19 define a periphery of the flexible body to be spaced inwardly from the periphery of the planar member. More specifically, claims 16-19 are patentable independent from the other claims since there is no teaching, suggestion or incentive

to provide the above noted structure, as described below in more detail.

As noted above, Phillips discloses a loading dock that includes a bag for moving a pivotable section. The bag covers substantially the entire bottom surface of the section. Smock discloses a dump vehicle having a chassis frame (10) and a series of dump bodies (12) that are tilttable using air bag assemblies (35). Neither of the cited references teaches the claimed loading bridge having a pivotally-mounted planar member and a flexible body with a periphery spaced inwardly from the periphery of the planar member. Further, the Examiner has not pointed to any specific teaching, suggestion or incentive supporting the combination, and therefore *prima facie* obviousness has not been established. MPEP §2142; In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990). Although the Phillips device could arguably be modified to achieve the loading bridge defined by claim 16, there must be a suggestion or motivation in the reference to do so. MPEP §2142; In re Mills, 16 USPQ2d at 1432. For these reasons, it is respectfully requested that the rejections of claims 16-19 be withdrawn.

The Examiner contends that "it would have been obvious . . . to make the periphery of the bag smaller than the periphery of the planar member in order to reduce the volume of air needed to operate the apparatus and/or to reduce the amount of material (and the weight and the expense) required for the bag (66)" Again, the Examiner is using hindsight to create incentives. The Examiner has provided no evidence that volume of air or amount of material is a concern to designers of these types of devices. In fact, air is cheap and material for the bag is a minor portion of the overall cost of the apparatus. It is acknowledged that a designer would like to decrease the overall cost of a design. However, in order for this rejection to stand, the Examiner must show that making the bag smaller was the rational means for achieving the goal.

In addition, use of the claimed bag in Phillips would change the principle of operation of the Phillips device and/or render the Phillips device inoperative. A reduction in the size of the bag of Phillips requires an increased pressure for actuation. Phillips teaches using only the exhaust of the vehicle as the pressurized gas. The exhaust of a vehicle is not sufficient to inflate the reduced size bag claimed in the present invention. Thus, reducing the size of the Phillips bag renders the Phillips device inoperative and/or would require the use of a high-pressure ventilator, which changes the basic principle of the Phillips device. Therefore, the rejection should be withdrawn. MPEP §2143.01.

Group V - claims 20-21

Claims 20-21 stand rejected under 35 U.S.C. §103 as being unpatentable over Phillips in view of Smock. Claims 20-21 are directed to a loading bridge for making a connection between a loading platform and vehicle. The loading bridge is defined as having a substantially planar member pivotally connected to the loading platform, a base positioned under the substantially planar member, pivot means including an inflatable flexible body for pivoting the substantially planar member, and means for detachably connecting the upper surface of the flexible body to the lower surface of the planar member. The detachably connecting means facilitates quick and easy removal of the flexible body from the planar member for repair and/or replacement.

Claims 20-21 are patentable separately from the other claims since claims 20-21 define a means for detachably connecting the upper surface of the flexible body to the lower surface of the planar member. More specifically, claims 20-21 are patentable independent from the other claims since there is no teaching, suggestion or incentive to provide the above noted structure, as described below in more detail.

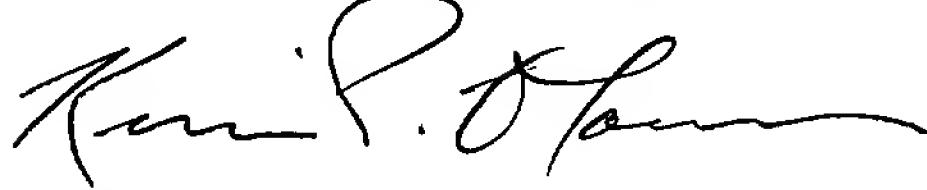
Initially, it is noted that the Examiner has provided no teaching, suggestion or incentive in the prior art for combining Phillips with Smock, and on this ground alone the obviousness rejection must fail. MPEP §2143; In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990). Furthermore, even if properly combined, the references do not meet the claimed loading bridge. More specifically, Phillips and Smock do not disclose the claimed loading bridge with a detachable connection between the bag and the section. The Examiner contends that the rings (37) of Smock illustrate the claimed invention. The rings are described as "clamping-ring units" for securing the upper end of the air bag assemblies to the body. However, Applicant could find no teaching, suggestion or motivation in Smock for making the air bag assemblies detachably connected to the body in the claimed manner, and therefore obviousness has not been established. In re Mills at 1432.

Applicant notes that the claimed phrase "means for detachably connecting" covers the structure disclosed in the specification and equivalents thereof, under a §112-¶6 analysis. The specification discloses buttons, which can be utilized without the need for extra tools. As used in this patent application, the phrase "means for detachably connecting" does not cover fasteners that require separate tools (e.g., bolts or screws) since such fasteners are not equivalent to buttons. Thus, the clamping-ring units (37) and corresponding fasteners disclosed in Smock do not anticipate the claimed "means for detachably connecting." Accordingly, it is submitted that claims 20 and 21 are allowable over Phillips in view of Smock.

### Conclusion

Applicant submits that all claims are allowable over the cited references, and favorable consideration is respectfully requested.

Respectfully submitted,



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## Appendix

1. Loading bridge for making a connection between a loading platform and vehicle, comprising:

a substantially planar member pivotally connected to the loading platform and capable of bearing a load, wherein a rear edge portion of said substantially planar member is hinged along a surface of the loading platform, and wherein a front edge is movable in a direction perpendicular to said surface of the loading platform; [and]

an inclined base positioned under the substantially planar member, and

~~S~~  
~~g~~  
~~member, said pivot means comprising an inflatable flexible body positioned on the inclined base.~~

2. A loading bridge as claimed in claim 1, wherein said pivot means further comprises means for filling said inflatable flexible body with air, said means for inflating comprising a ventilator positioned under said inclined base.

3. A loading bridge as claimed in claim 1, wherein said flexible body is a bag made of polyethylene which covers a substantial portion of a bottom surface of the substantially planar member.

4. A loading bridge as claimed in claim 1, wherein said flexible body is a bag made of PVC which covers a substantial portion of a bottom surface of the substantially planar member.

5. A loading bridge as claimed in claim 1, further comprising

a front skirt extending downwardly from a front portion of a bottom surface of the substantially planar member; and

first and second side skirts extending downwardly from opposite side portions of the bottom surface of the substantially planar member; wherein when said flexible body is in a deflated condition said flexible body is stored between said front skirt and said first and second side skirts in a folded fashion, and wherein as said flexible body is inflated side portions of said flexible body are played out from the skirts onto a housing of the loading platform.

6. A loading bridge as claimed in claim 1, wherein said flexible body is a bellows having a rigid bottom and rigid top, and wherein said rigid top is connected to a bottom surface of the substantially planar member.

7. A loading bridge as claimed in claim 6, wherein said bellows is a air spring.

*Comb/Sub*

8. A loading bridge as claimed in claim 1, wherein the loading platform has a recess and a housing formed in a bottom portion of said recess, wherein said substantially planar member is disposed within said recess, and wherein said flexible body is disposed within said housing.

9. A loading bridge as claimed in claim 1, further comprising a lid hingedly connected to the front edge of said substantially planar member.

10. A loading bridge as claimed in claim 9, wherein when ~~said~~ loading bridge is in a loaded condition said substantially planar member is supported on the vehicle by ~~said~~ lid.

11. A loading bridge as claimed in claim 9, further comprising control means for controlling movement of said lid, wherein said lid is controlled to an upward position during upward movement of the substantially planar member.

12. A loading bridge as claimed in claim 1, wherein said inclined base is angled upwardly and rearwardly toward the rear edge portion.

13. Loading bridge for making a connection between a loading platform and vehicle, comprising:

a substantially planar member pivotally connected to the loading platform and capable of bearing a load, wherein a rear edge portion of said substantially planar member is hinged along a surface of the loading platform, and wherein a front edge is movable in a direction perpendicular to said surface of the loading platform;

a base positioned under said planar member;  
pivot means for pivoting said substantially planar member, said pivot means comprising an inflatable flexible body;  
and

means for inflating said inflatable flexible body, said means for inflating including a ventilator positioned under said base.

14. A loading bridge as claimed in claim 13, wherein said base includes a hole for allowing communication between said inflatable flexible body and said ventilator.

15. A loading bridge as claimed in claim 13, wherein said inflatable flexible body includes an opening in a bottom portion for allowing communication with said ventilator.

16. Loading bridge for making a connection between a loading platform and vehicle, comprising:

a substantially planar member having a periphery and pivotally connected to the loading platform and capable of bearing a load, wherein a rear edge portion of said substantially planar member is hinged along a surface of the loading platform, and wherein a front edge is movable in a direction perpendicular to said surface of the loading platform;

a base positioned under said planar member; and  
pivot means for pivoting said substantially planar member, said pivot means comprising an inflatable flexible body, said inflatable flexible body having a periphery that is spaced inwardly from a periphery of the planar member.

17. A loading bridge as claimed in claim 16, wherein said periphery of the planar member has opposing sides and wherein said inflatable flexible body is centrally positioned between opposing sides of said planar member.

18. A loading bridge as claimed in claim 16, further comprising at least one annular member surrounding at least a portion of the inflatable flexible body and positioned to limit lateral expansion of said inflatable flexible body.

19. A loading bridge as claimed in claim 18, wherein said loading bridge includes a plurality of said annular members.

20. Loading bridge for making a connection between a loading platform and vehicle, comprising:

a substantially planar member pivotally connected to the loading platform and capable of bearing a load, wherein a rear edge portion of said substantially planar member is hinged along a surface of the loading platform, and wherein a front edge is movable in a direction perpendicular to said surface of the loading platform;

a base positioned under said planar member;

pivot means for pivoting said substantially planar member, said pivot means comprising an inflatable flexible body; and

means for detachably connecting an upper surface of said inflatable flexible body with a lower surface of said planar member.

21. A loading bridge as claimed in claim 20, wherein said means for detachably connecting includes buttons.